

Appl. No. 10/812,449  
Amdt. Dated April 12, 2005  
Reply to Office action of January 12, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) An improved boot for use in sealing a constant velocity joint and ball spline joint assembly, the boot comprising:
  - a plurality of articulating convolutes;
  - a grease catching member;
  - a first stabilizing member joining the plurality of articulating convolutes and the grease catching member, the first stabilizing member adapted to ride above an inner race of the ball joint to provide stability at high speed;
  - a plurality of plunging convolutes;
  - a second stabilizing member joining the plurality of plunging convolutes and the grease catching member, the second stabilizing member adapted to ride above an outer race of the ball spline joint to provide additional stability.
2. (Original) An improved boot as in claim 1, wherein the articulating convolutes are adapted to accommodate joint articulation to an angle of at least 15 degrees.
3. (Original) An improved boot as in claim 1, wherein the plunging convolutes are adapted to accommodate joint plunge to an angle of at least 45 mm.
4. (Original) An improved boot as in claim 1, wherein the first stabilizing member is adapted to ride approximately 1 mm above the inner race of the ball spline joint.
5. (Original) An improved boot as in claim 1, wherein the second stabilizing member is adapted to ride approximately 1 mm above the outer race of the ball spline joint.
6. (Original) An improved boot as in claim 1, wherein the constant velocity joint is a

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high-speed fixed joint.

7. (Original) An improved boot as in claim 1, wherein the boot is adapted to accommodate vehicle installation at an angle of at least 15 degrees.
8. (Original) An improved boot as in claim 1, wherein the boot is adapted to accommodate joint operation of at least 7 degrees and 9000 revolutions per minute.
9. (Original) An improved boot as in claim 1, wherein the boot is adapted to accommodate crash plunge of at least 30 mm extension and 15 mm compression.
10. (Original) An improved boot as in claim 1, wherein the boot is adapted to accommodate joint plunge of at least 15 mm extension and 15 mm compression.
11. (Original) An improved boot as in claim 1, wherein the boot is comprised of a thermoplastic material.
12. (Original) An improved joint assembly, comprising:
  - a constant velocity joint;
  - a ball spline joint affixable to the fixed joint, the ball spline joint having an inner race and an outer race; and
  - a boot affixable to the fixed joint and the ball spline joint to seal and house the combined joints, the boot comprising:
    - a plurality of articulating convolutes;
    - a grease catching member;
    - a first stabilizing member joining the plurality of articulating convolutes and the grease catching member, the first stabilizing member adapted to ride above the inner race of the ball joint to provide stability at high speed;
    - a plurality of plunging convolutes;
    - a second stabilizing member joining the plurality of plunging convolutes and the grease catching member, the second stabilizing member having a substantially constant

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wall thickness and adapted to ride above the outer race of the ball spline joint to provide additional stability.

13. (Original) An improved joint assembly as in claim 12, wherein the constant velocity joint is a high speed fixed joint.
14. (Original) An improved joint assembly as in claim 12, wherein the assembly is adapted for use in a propshaft.
15. (Original) An improved joint assembly as in claim 12, wherein the articulating convolutes are adapted to accommodate joint articulation to an angle of at least 15 degrees.
16. (Original) An improved joint assembly as in claim 12, wherein the plunging convolutes are adapted to accommodate joint plunge to an angle of at least 45 mm.
17. (Original) An improved joint assembly as in claim 12, wherein the first stabilizing member is adapted to ride approximately 1 mm above the inner race of the ball spline joint.
18. (Original) An improved joint assembly as in claim 12, wherein the second stabilizing member is adapted to ride approximately 1 mm above the outer race of the ball spline joint.
19. (Original) An improved joint assembly as in claim 12, wherein the boot is adapted to accommodate vehicle installation at an angle of at least 15 degrees.
20. (Original) An improved joint assembly as in claim 12, wherein the boot is adapted to accommodate joint operation of at least 7 degrees and 9000 revolutions per minute.
21. (Original) An improved joint assembly as in claim 12, wherein the boot is adapted to accommodate crash plunge of at least 30 mm extension and 15 mm compression.
22. (Original) An improved joint assembly as in claim 12, wherein the boot is adapted to

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accommodate joint plunge of at least 15 mm extension and 15 mm compression.

23. (Original) An improved boot for use in sealing a high-speed fixed joint and ball spline joint assembly, the boot comprising:

a plurality of articulating convolutes adapted to accommodate joint articulation of at least 15 degrees;

a grease catching member;

a first stabilizing member joining and contiguous with the plurality of articulating convolutes and the grease catching member, the first stabilizing member adapted to ride approximately 1 mm above an inner race of the ball joint to provide stability at high speed;

a plurality of plunging convolutes adapted to accommodate joint plunge to an angle of at least 45 mm;

a second stabilizing member joining and contiguous with the plurality of plunging convolutes and the grease catching member, the second stabilizing member having a substantially constant wall thickness and adapted to ride approximately 1 mm above an outer race of the ball spline joint to provide additional stability.

24. (New) An improved boot as in claim 1, wherein an external diameter of the grease catching member is generally greater than external diameters of either the first stabilizing member or the second stabilizing member.

25. (New) An improved boot as in claim 1, wherein an external diameter of the first stabilizing member is generally less than an external diameter of either the second stabilizing member of the outer race of the ball spline joint.